

Tybouts Corner Landfill

EPA Region 3

Delaware

New Castle County

10 miles south of

Wilmington

EPA ID# DED000606079

1st Congressional District

Last Update:

August 2002

Other Names: None

Current Site Status

The U.S. Environmental Protection Agency has overseen the cleanup of the Tybouts Corner Landfill Site. Construction activities for this site were completed in September 1995. Operation and maintenance activities associated with the landfill cap and the groundwater extraction system are ongoing. During routine maintenance, methane gas was detected outside the limits of the landfill. Additional venting equipment was installed in October 1996 as a temporary measure to prevent gases from migrating off-site. Construction of a permanent active gas collection system was completed in December 2000. Periodic monitoring of the gas continues. Groundwater will be pumped for up to ten years or until the concentration of volatile organics reaches acceptable levels.

Site Description

Tybouts Corner Landfill Site is located in New Castle County,

Delaware approximately 10 miles south of Wilmington and four miles west of the Delaware River. The site was used by the New Castle County Department of Public Works as a municipal sanitary landfill that also accepted industrial wastes from December 1968 until July 1971. The landfill consisted of two noncontiguous sections, a west landfill that was about four acres in size and the main landfill that was about 47 acres, ranging from five to 40 feet thick. The first reported occurrence of contamination from the Tybouts Site was a domestic water well in May of 1976. A second private well was found to be contaminated in 1983. These are the only two water supply wells reported to be contaminated from the site to date. The contaminants of concern include the VOCs vinyl chloride, benzene, and 1,2-dichloroethane, and various other organic and inorganic chemicals.

Site Responsibility

Cleanup of this site is the responsibility of federal and state governments and parties potentially responsible for site contamination.

NPL Listing History

This site was proposed to the National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites requiring long term remedial action on December 30, 1982. The site was formally added to the list September 8, 1983, making it eligible for federal cleanup funds.

Threats and Contaminants

The site was ranked on the NPL in 1983 due to a threat of contamination of the regional aquifer, the primary source of water in this region in Delaware. The site also presented a threat to domestic wells in the immediate vicinity. In 1985, EPA installed a water line to supply homes in the vicinity of the site with public water. The contaminants of concern include vinyl chloride, benzene, and 1,2-dichloroethane, and various other organic and inorganic chemicals.

Contaminant descriptions and associated risk factors are available on the Agency for Toxic Substance and Disease Registry, an arm of the CDC, web site at <http://www.atsdr.cdc.gov/hazdat.html> 

Cleanup Progress

In 1985, EPA installed a water line to supply homes in the vicinity of the site with public water, thereby eliminating the immediate threat. The contaminants of concern are vinyl chloride, benzene, and 1,2-dichloroethane.

On December 20, 1988, EPA entered into a mixed-funding settlement with several parties to implement the remedy selected in the March 6, 1986 Record of Decision (ROD). In that decision, EPA selected a cleanup remedy calling for excavation and consolidation of the west landfill to the main landfill; installation of a multi-layered cap to minimize infiltration of rainfall; installation of a subsurface drain to minimize lateral migration of groundwater and another subsurface drain to collect leachate; and a pump and treat system for the contaminated groundwater and leachate. In the primary settlement, three of the settling parties agreed to design and construct the remedy with the ability to be reimbursed for 21 percent of the costs of the remedial action.

The selected remedy was modified by an Explanation of Significant Differences on May 4, 1992. Construction started on March 30, 1993. In addition to what the ROD called for, the construction also included a modified collection system for leachate generated by the landfill, installation of vents for gases generated within the landfill, and replacement of the existing fence to minimize access. The leachate and/or ground water is pumped and directly discharged to the city of Wilmington Waste Water Treatment Plant. Construction was completed in September 1995.

During routine maintenance, methane gas was detected outside the limits of the landfill. Additional venting equipment was installed in October 1996 to prevent gases from migrating off-site. An investigation to determine the source and path of the gas, as well as to evaluate potential remediation alternatives, was conducted. The landfill gas migration assessment was approved in December 1999. Construction of a permanent active gas collection system was completed in December 2000. Groundwater will be pumped for up to 10 years or until the concentration of volatile organics reaches acceptable levels.

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